```
Connecting via Winsock to STN



Welcome to STN International!  Enter x:x

LOGINID:ssspta1653hxp

PASSWORD:
TERMINAL (ENTER 1, 2, 3, OR ?):2


* * * * * * * * * *   Welcome to STN International   * * * * * * * * * *

 NEWS  1           Web Page URLs for STN Seminar Schedule - N. America
 NEWS  2           "Ask CAS" for self-help around the clock
 NEWS  3  Jul 12   BEILSTEIN enhanced with new display and select options,
                   resulting in a closer connection to BABS
 NEWS  4  Jul 30   BEILSTEIN on STN workshop to be held August 24 in conjunction
                   with the 228th ACS National Meeting
 NEWS  5  AUG 02   IFIPAT/IFIUDB/IFICDB reloaded with new search and display
                   fields
 NEWS  6  AUG 02   CAplus and CA patent records enhanced with European and Japan
                   Patent Office Classifications
 NEWS  7  AUG 02   The Analysis Edition of STN Express with Discover!
                   (Version 7.01 for Windows) now available
 NEWS  8  AUG 04   Pricing for the Save Answers for SciFinder Wizard within
                   STN Express with Discover! will change September 1, 2004
 NEWS  9  AUG 27   BIOCOMMERCE: Changes and enhancements to content coverage
 NEWS 10  AUG 27   BIOTECHABS/BIOTECHDS: Two new display fields added for legal
                   status data from INPADOC
 NEWS 11  SEP 01   INPADOC: New family current-awareness alert (SDI) available
 NEWS 12  SEP 01   New pricing for the Save Answers for SciFinder Wizard within
                   STN Express with Discover!
 NEWS 13  SEP 01   New display format, HITSTR, available in WPIDS/WPINDEX/WPIX
 NEWS 14  SEP 14   STN Patent Forum to be held October 13, 2004, in Iselin, NJ
 NEWS 15  SEP 27   STANDARDS will no longer be available on STN
 NEWS 16  SEP 27   SWETSCAN will no longer be available on STN

 NEWS EXPRESS  JULY 30 CURRENT WINDOWS VERSION IS V7.01, CURRENT
               MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
               AND CURRENT DISCOVER FILE IS DATED 11 AUGUST 2004
 NEWS HOURS    STN Operating Hours Plus Help Desk Availability
 NEWS INTER    General Internet Information
 NEWS LOGIN    Welcome Banner and News Items
 NEWS PHONE    Direct Dial and Telecommunication Network Access to STN
 NEWS WWW      CAS World Wide Web Site (general information)

Enter NEWS followed by the item number or name to see news on that
specific topic.

  All use of STN is subject to the provisions of the STN Customer
  agreement.  Please note that this agreement limits use to scientific
  research.  Use for software development or design or implementation
  of commercial gateways or other similar uses is prohibited and may
  result in loss of user privileges and other penalties.

  * * * * * * * * * * * * * * STN  Columbus  * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 18:47:38 ON 27 SEP 2004

=> file medline, uspatful, dgene, embase, wpids, hcaplus, biosis, biotechds
```

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.42	0.42

FILE 'MEDLINE' ENTERED AT 18:48:29 ON 27 SEP 2004

FILE 'USPATFULL' ENTERED AT 18:48:29 ON 27 SEP 2004
CA INDEXING COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'DGENE' ENTERED AT 18:48:29 ON 27 SEP 2004
COPYRIGHT (C) 2004 THOMSON DERWENT

FILE 'EMBASE' ENTERED AT 18:48:29 ON 27 SEP 2004
COPYRIGHT (C) 2004 Elsevier Inc. All rights reserved.

FILE 'WPIDS' ENTERED AT 18:48:29 ON 27 SEP 2004
COPYRIGHT (C) 2004 THE THOMSON CORPORATION

FILE 'HCAPLUS' ENTERED AT 18:48:29 ON 27 SEP 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'BIOSIS' ENTERED AT 18:48:29 ON 27 SEP 2004
Copyright (c) 2004 The Thomson Corporation.

FILE 'BIOTECHDS' ENTERED AT 18:48:29 ON 27 SEP 2004
COPYRIGHT (C) 2004 THE THOMSON CORPORATION

=> s articular cartilage repair
L1 453 ARTICULAR CARTILAGE REPAIR

=> s l1 and BMP
L2 57 L1 AND BMP

=> d l2 ti abs ibib tot

L2 ANSWER 1 OF 57 MEDLINE on STN
TI **Articular cartilage repair** by gene therapy
using growth factor-producing mesenchymal cells.
AB OBJECTIVE: To investigate the repair of partial-thickness lesions in rat articular cartilage by combining cell transplantation with transfer of growth factor complementary DNA (cDNA). METHODS: Mesenchymal cells isolated from rib perichondrium were infected ex vivo with adenoviral vectors carrying bone morphogenetic protein 2 (**BMP**-2) or insulin-like growth factor 1 (IGF-1) cDNA. The cells were suspended in fibrin glue and applied to mechanically induced partial-thickness cartilage lesions in the patellar groove of the rat femur. The filling of the defects was quantified and the quality and integration of the newly formed tissue were assessed by histochemical and immunohistochemical methods. Uninfected cells or cells infected with a LacZ reporter gene vector served as controls. RESULTS: Transplanted cells were able to attach to the wounded articular cartilage and were not displaced from the lesions by joint movement. Cells infected with both adenoviral vectors AdBMP-2 and AdIGF-1 produced repair cartilage of hyaline morphology containing a type II collagen-positive but type I collagen-negative proteoglycan-rich matrix that restored the articular surface in most lesions. Uninfected cells either failed to fill up the defects or formed fibrous tissue mainly composed of type I collagen. Excessive cells were partially dislocated to the joint margins, leading to osteophyte formation there if AdBMP-2-infected cells were used. These adverse effects, however, were not seen with AdIGF-1-infected cells. CONCLUSION: Stimulation of perichondrium-derived mesenchymal cells by transfer of growth factor cDNA in a partial-thickness defect model allows for

satisfactory cartilage restoration by a repair tissue comparable with hyaline articular cartilage.

ACCESSION NUMBER: 2003060377 MEDLINE
DOCUMENT NUMBER: PubMed ID: 12571853
TITLE: **Articular cartilage repair** by gene therapy using growth factor-producing mesenchymal cells.
AUTHOR: Gelse Kolja; von der Mark Klaus; Aigner Thomas; Park Jung; Schneider Holm
CORPORATE SOURCE: University of Erlangen-Nuernberg, Erlangen, Germany.
SOURCE: Arthritis and rheumatism, (2003 Feb) 48 (2) 430-41. Journal code: 0370605. ISSN: 0004-3591.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 200303
ENTRY DATE: Entered STN: 20030207
Last Updated on STN: 20030314
Entered Medline: 20030313

L2 ANSWER 2 OF 57 MEDLINE on STN
TI Stimulation of **articular cartilage repair** in established arthritis by local administration of transforming growth factor-beta into murine knee joints.
AB A severe consequence of rheumatoid arthritis is depletion of proteoglycans (PGs) from articular cartilage leading to functional impairment of this tissue. We investigated whether local administration of anabolic factors (transforming growth factors-beta1 and -beta2 [TGF-beta1 and -beta2, respectively] and bone morphogenetic protein-2 (**BMP**-2) into joints could stimulate cartilage repair during arthritis. A unilateral arthritis was induced in mice by intra-articular injection of zymosan. Starting on Day 4 after the induction of arthritis, three injections of TGF-beta1 (200 ng) were given (Days 4, 6, and 8). On Day 11, articular cartilage PG synthesis was measured by 35S-sulfate incorporation, and histologic knee joint sections were prepared, which were used to analyze cartilage PG content by quantification of safranin O staining. Additionally, histologic sections were used to analyze inflammation and chondrophyte-formation. Local administration of TGF-beta1 did not modify inflammation but clearly stimulated PG synthesis and restored PG content of depleted cartilage. TGF-beta2 appeared to be as potent as TGF-beta1 in the stimulation of cartilage repair, and both TGF-beta isoforms also stimulated the formation of chondrophytes in this rodent model. In contrast to TGF-beta, three intra-articular injections with 200 ng **BMP**-2 did not stimulate the repair process. In summary, this study demonstrates for the first time that local administration of TGF-beta into arthritic joints stimulates the replenishment of PGs in depleted cartilage.

ACCESSION NUMBER: 1998143240 MEDLINE
DOCUMENT NUMBER: PubMed ID: 9484711
TITLE: Stimulation of **articular cartilage repair** in established arthritis by local administration of transforming growth factor-beta into murine knee joints.
AUTHOR: Glansbeek H L; van Beuningen H M; Vitters E L; van der Kraan P M; van den Berg W B
CORPORATE SOURCE: Department of Rheumatology, University Hospital Nijmegen, The Netherlands.
SOURCE: Laboratory investigation; a journal of technical methods and pathology, (1998 Feb) 78 (2) 133-42. Journal code: 0376617. ISSN: 0023-6837.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English

FILE SEGMENT: Priority Journals
ENTRY MONTH: 199803
ENTRY DATE: Entered STN: 19980326
Last Updated on STN: 19980326
Entered Medline: 19980319

L2 ANSWER 3 OF 57 USPATFULL on STN
TI Adipose tissue-derived adult stem or stromal cells for the repair of articular cartilage fractures and uses thereof
AB The invention provides cells, methods and compositions based upon the use of adipose tissue-derived adult stem cells in the repair of articular cartilage fractures or defects. The invention is useful in providing a treatment of articular cartilage fractures in a clinical setting.

ACCESSION NUMBER: 2004:214991 USPATFULL
TITLE: Adipose tissue-derived adult stem or stromal cells for the repair of articular cartilage fractures and uses thereof
INVENTOR(S): Kolkin, Jon, Raleigh, NC, UNITED STATES
Gimble, Jeffrey M., Baton Rouge, LA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2004166096	A1	20040826
APPLICATION INFO.:	US 2003-713906	A1	20030114 (10)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 2002-125106, filed on 18 Apr 2002, PENDING Continuation of Ser. No. US 2000-573989, filed on 17 May 2000, GRANTED, Pat. No. US 6429013

	NUMBER	DATE
PRIORITY INFORMATION:	US 1999-149850P	19990819 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: Morgan, Lewis & Bockius, LLP, 1701 Market Street, Philadelphia, PA, 19103
NUMBER OF CLAIMS: 19
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 4 Drawing Page(s)
LINE COUNT: 1160

L2 ANSWER 4 OF 57 USPATFULL on STN
TI Use of insulin for the treatment of cartilaginous disorders
AB The present invention relates to methods for the treatment and repair of cartilage, including cartilage damaged by injury or cartilaginous disorders, including arthritis, comprising the administration of insulin and/or insulin variants. Optionally, the administration may be in combination with a cartilage agent (e.g., peptide growth factor, catabolism antagonist, osteo-, synovial, anti-inflammatory factor), in an extended- or sustained-release form. Alternatively, the method provides for the treatment and repair of cartilage damaged by injury or cartilaginous disorders comprising the administration of insulin and/or insulin in combination with standard surgical techniques. Alternatively, the method provides for the treatment and repair of cartilage damaged by injury or cartilaginous disorders comprising the administration of chondrocytes previously treated with an effective amount of insulin and/or insulin variant.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
ACCESSION NUMBER: 2004:178931 USPATFULL
TITLE: Use of insulin for the treatment of cartilaginous disorders

INVENTOR(S): Filvaroff, Ellen H., San Francisco, CA, UNITED STATES
Okumu, Franklin W., Oakland, CA, UNITED STATES
PATENT ASSIGNEE(S): Genentech, Inc. (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2004138101	A1	20040715
APPLICATION INFO.:	US 2003-740098	A1	20031217 (10)

RELATED APPLN. INFO.: Continuation of Ser. No. US 2001-815229, filed on 22 Mar 2001, GRANTED, Pat. No. US 6689747

	NUMBER	DATE
PRIORITY INFORMATION:	US 2000-192103P	20000324 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: GENENTECH, INC., 1 DNA WAY, SOUTH SAN FRANCISCO, CA, 94080
NUMBER OF CLAIMS: 48
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 26 Drawing Page(s)
LINE COUNT: 5581
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L2 ANSWER 5 OF 57 USPATFULL on STN
TI Methods and compositions for healing and repair of articular cartilage
AB Methods and compositions are provided for the treatment of articular cartilage defects and disease involving the combination of tissue, such as osteochondral grafts, with active growth factor. The active growth factor is preferably a composition containing at least one bone morphogenetic protein and a suitable carrier. The method results in the regeneration of functional repair of articular cartilage tissue.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
ACCESSION NUMBER: 2004:103728 USPATFULL
TITLE: Methods and compositions for healing and repair of articular cartilage
INVENTOR(S): Zhang, Renwen, Rutherford, NJ, United States
Peluso, Diane, Marshfield, MA, United States
Morris, Elisabeth, Sherborn, MA, United States
PATENT ASSIGNEE(S): Genetics Institute, LLC., Cambridge, MA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6727224	B1	20040427
APPLICATION INFO.:	US 2000-493545		20000128 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 1999-118160P	19990201 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Low, Christopher S. F.
ASSISTANT EXAMINER: Robinson, Hope A.
LEGAL REPRESENTATIVE: Finnegan, Henderson, Farabow, Garrett & Dunner LLP.
NUMBER OF CLAIMS: 13
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 0 Drawing Figure(s); 0 Drawing Page(s)
LINE COUNT: 390
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L2 ANSWER 6 OF 57 USPATFULL on STN
TI Functionalized derivatives of hyaluronic acid, formation of hydrogels in

situ using same, and methods for making and using same

AB Methods for chemical modification of hyaluronic acid, formation of amine or aldehyde functionalized hyaluronic acid, and the cross-linking thereof to form hydrogels are provided. Functionalized hyaluronic acid hydrogels of this invention can be polymerized in situ, are biodegradable, and can serve as a tissue adhesive, a tissue separator, a drug delivery system, a matrix for cell cultures, and a temporary scaffold for tissue regeneration.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER:	2004:95338 USPATFULL
TITLE:	Functionalized derivatives of hyaluronic acid, formation of hydrogels in situ using same, and methods for making and using same
INVENTOR(S):	Aeschlimann, Daniel, Madison, WI, UNITED STATES Bulpitt, Paul, Madison, WI, UNITED STATES
PATENT ASSIGNEE(S):	ORTHOGENE, L L C. (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2004072793	A1	20040415
APPLICATION INFO.:	US 2003-680000	A1	20031006 (10)

RELATED APPLN. INFO.:	Division of Ser. No. US 1998-156829, filed on 18 Sep 1998, GRANTED, Pat. No. US 6630457
DOCUMENT TYPE:	Utility
FILE SEGMENT:	APPLICATION
LEGAL REPRESENTATIVE:	FISH & NEAVE, 1251 AVENUE OF THE AMERICAS, 50TH FLOOR, NEW YORK, NY, 10020-1105
NUMBER OF CLAIMS:	39
EXEMPLARY CLAIM:	1
NUMBER OF DRAWINGS:	13 Drawing Page(s)
LINE COUNT:	1204

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L2 ANSWER 7 OF 57 USPATFULL on STN

TI Pluripotent embryonic-like stem cells, compositions, methods and uses thereof

AB The present invention relates to pluripotent stem cells, particularly to pluripotent embryonic-like stem cells. The invention further relates to methods of purifying pluripotent embryonic-like stem cells and to compositions, cultures and clones thereof. The present invention also relates to a method of transplanting the pluripotent stem cells of the present invention in a mammalian host, such as human, comprising introducing the stem cells, into the host. The invention further relates to methods of in vivo administration of a protein or gene of interest comprising transfecting a pluripotent stem cell with a construct comprising DNA which encodes a protein of interest and then introducing the stem cell into the host where the protein or gene of interest is expressed. The present also relates to methods of producing mesodermal, endodermal or ectodermal lineage-committed cells by culturing or transplantation of the pluripotent stem cells of the present invention.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER:	2004:44224 USPATFULL
TITLE:	Pluripotent embryonic-like stem cells, compositions, methods and uses thereof
INVENTOR(S):	Young, Henry E., Macon, GA, UNITED STATES Lucas, Paul A., Poughkeepsie, NY, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2004033214	A1	20040219
APPLICATION INFO.:	US 2003-443663	A1	20030522 (10)

RELATED APPLN. INFO.:	Continuation of Ser. No. US 1999-404895, filed on 24

Sep 1999, ABANDONED
DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: KLAUBER & JACKSON, 411 HACKENSACK AVENUE, HACKENSACK, NJ, 07601
NUMBER OF CLAIMS: 32
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 33 Drawing Page(s)
LINE COUNT: 7392
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L2 ANSWER 8 OF 57 USPATFULL on STN
TI Attachment of absorbable tissue scaffolds to fixation devices
AB The present invention relates to tissue scaffold implant devices useful in the repair and/or regeneration of diseased and/or damaged musculoskeletal tissue and that include a tissue scaffold component fixedly attached to a scaffold fixation component via at least one of sutures, fabrics, fibers, threads, elastomeric bands, reinforcing elements and interlocking protrusions for engaging and maintaining the scaffold component fixedly attached to the fixation component.

ACCESSION NUMBER: 2003:319709 USPATFULL
TITLE: Attachment of absorbable tissue scaffolds to fixation devices
INVENTOR(S): Hammer, Joseph J., Bridgewater, NJ, UNITED STATES
Contiliano, Joseph H., Stewartsville, NJ, UNITED STATES
Schwartz, Herbert Eugene, Fort Wayne, IN, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003225459	A1	20031204
APPLICATION INFO.:	US 2002-159178	A1	20020531 (10)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: PHILIP S. JOHNSON, JOHNSON & JOHNSON, ONE JOHNSON & JOHNSON PLAZA, NEW BRUNSWICK, NJ, 08933-7003
NUMBER OF CLAIMS: 20
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 6 Drawing Page(s)
LINE COUNT: 526

L2 ANSWER 9 OF 57 USPATFULL on STN
TI Bone morphogenic protein polynucleotides, polypeptides, and antibodies
AB The present invention relates to novel human **BMP** polypeptides and isolated nucleic acids containing the coding regions of the genes encoding such polypeptides. Also provided are vectors, host cells, antibodies, and recombinant methods for producing human **BMP** polypeptides. The invention further relates to diagnostic and therapeutic methods useful for diagnosing and treating disorders related to these novel human **BMP** polypeptides.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
ACCESSION NUMBER: 2003:318756 USPATFULL
TITLE: Bone morphogenic protein polynucleotides, polypeptides, and antibodies
INVENTOR(S): Young, Paul E., Gaithersburg, MD, UNITED STATES
Ruben, Steven M., Brookeville, MD, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003224501	A1	20031204
APPLICATION INFO.:	US 2003-366345	A1	20030214 (10)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 2003-345236, filed on 16 Jan 2003, PENDING Continuation-in-part of Ser.

No. US 2001-809269, filed on 16 Mar 2001, ABANDONED
Continuation-in-part of Ser. No. WO 2001-US9229, filed on 23 Mar 2001, PENDING

	NUMBER	DATE
PRIORITY INFORMATION:	US 2002-356749P	20020215 (60)
	US 2000-190067P	20000317 (60)
	US 2002-348621P	20020117 (60)
	US 2002-349356P	20020122 (60)
	US 2002-351520P	20020128 (60)
	US 2002-354265P	20020206 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE, ROCKVILLE, MD, 20850
NUMBER OF CLAIMS: 42
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 23 Drawing Page(s)
LINE COUNT: 16963
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L2 ANSWER 10 OF 57 USPATFULL on STN
TI Attachment of absorbable tissue scaffolds ot fixation devices
AB The present invention relates to tissue scaffold implant devices useful in the repair and/or regeneration of diseased and/or damaged musculoskeletal tissue and that include a tissue scaffold component fixedly attached to a scaffold fixation component via a polymeric adhesive layer, and to methods of making such tissue scaffold implant devices.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
ACCESSION NUMBER: 2003:313092 USPATFULL
TITLE: Attachment of absorbable tissue scaffolds ot fixation devices
INVENTOR(S): Hammer, Joseph J., Bridgewater, NJ, UNITED STATES
Contiliano, Joseph H., Stewartsville, NJ, UNITED STATES
Vyakarnam, Murty N., New York, NY, UNITED STATES
Brown, Kelly R., Hillsborough, NJ, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003220700	A1	20031127
APPLICATION INFO.:	US 2002-154136	A1	20020522 (10)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: AUDLEY A. CIAMPORCERO JR., JOHNSON & JOHNSON, ONE JOHNSON & JOHNSON PLAZA, NEW BRUNSWICK, NJ, 08933-7003
NUMBER OF CLAIMS: 18
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 2 Drawing Page(s)
LINE COUNT: 585
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L2 ANSWER 11 OF 57 USPATFULL on STN
TI Bone morphogenic protein polynucleotides, polypeptides, and antibodies
AB The present invention relates to novel human **BMP** polypeptides and isolated nucleic acids containing the coding regions of the genes encoding such polypeptides. Also provided are vectors, host cells, antibodies, and recombinant methods for producing human **BMP** polypeptides. The invention further relates to diagnostic and therapeutic methods useful for diagnosing and treating disorders related to these novel human **BMP** polypeptides.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2003:306402 USPATFULL

TITLE: Bone morphogenic protein polynucleotides, polypeptides, and antibodies

INVENTOR(S): Young, Paul E., Gaithersburg, MD, UNITED STATES
Ruben, Steven M., Brookeville, MD, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003215836	A1	20031120
APPLICATION INFO.:	US 2003-345236	A1	20030116 (10)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 2001-809269, filed on 16 Mar 2001, ABANDONED Continuation-in-part of Ser. No. WO 2001-US9229, filed on 23 Mar 2001, PENDING

	NUMBER	DATE
PRIORITY INFORMATION:	US 2000-190067P	20000317 (60)
	US 2002-348621P	20020117 (60)
	US 2002-349356P	20020122 (60)
	US 2002-351520P	20020128 (60)
	US 2002-354265P	20020206 (60)

DOCUMENT TYPE: Utility

FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE, ROCKVILLE, MD, 20850

NUMBER OF CLAIMS: 41

EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 10 Drawing Page(s)

LINE COUNT: 17572

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L2 ANSWER 12 OF 57 USPATFULL on STN

TI Regulation of genes via application of specific and selective electrical and electromagnetic signals

AB Methods and devices (10) for the regulation of gene expression by cells via the application of specific and selective electric and electromagnetic signals so as to target diseased or injured tissue for treatment. Gene expression is the up regulation or down regulation of the process whereby specific portions, genes of the human genome (DNA) are transcribed into mRNA and subsequently translated into protein.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2003:299863 USPATFULL

TITLE: Regulation of genes via application of specific and selective electrical and electromagnetic signals

INVENTOR(S): Brighton, Carl T, Malvern, PA, UNITED STATES
Pollack, Solomon R, North Wales, PA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003211084	A1	20031113
APPLICATION INFO.:	US 2002-257126	A1	20021008 (10)
	WO 2001-US5591		20010222

DOCUMENT TYPE: Utility

FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: WOODCOCK WASHBURN LLP, ONE LIBERTY PLACE, 46TH FLOOR, 1650 MARKET STREET, PHILADELPHIA, PA, 19103

NUMBER OF CLAIMS: 25

EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 12 Drawing Page(s)

LINE COUNT: 938

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L2 ANSWER 13 OF 57 USPATFULL on STN

TI Functionalized derivatives of hyaluronic acid, formation of hydrogels in situ using same, and methods for making and using same

AB Methods for chemical modification of hyaluronic acid, formation of amine or aldehyde functionalized hyaluronic acid, and the cross-linking thereof to form hydrogels are provided. Functionalized hyaluronic acid hydrogels of this invention can be polymerized in situ, are biodegradable, and can serve as a tissue adhesive, a tissue separator, a drug delivery system, a matrix for cell cultures, and a temporary scaffold for tissue regeneration.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2003:268207 USPATFULL

TITLE: Functionalized derivatives of hyaluronic acid, formation of hydrogels in situ using same, and methods for making and using same

INVENTOR(S): Aeschlimann, Daniel, Madison, WI, United States
Bulpitt, Paul, Madison, WI, United States

PATENT ASSIGNEE(S): Orthogene LLC, Sausalito, CA, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 6630457	B1	20031007	
APPLICATION INFO.:	US 1998-156829		19980918	(9)

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Fonda, Kathleen K.
LEGAL REPRESENTATIVE: Fish & Neave, Massaro, Jane A., Rochester, S. Craig
NUMBER OF CLAIMS: 19
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 13 Drawing Figure(s); 13 Drawing Page(s)
LINE COUNT: 1340

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L2 ANSWER 14 OF 57 USPATFULL on STN

TI Pluripotent embryonic-like stem cells, compositions, methods and uses thereof

AB The present invention relates to pluripotent stem cells, particularly to pluripotent embryonic-like stem cells. The invention further relates to methods of purifying pluripotent embryonic-like stem cells and to compositions, cultures and clones thereof. The present invention also relates to a method of transplanting the pluripotent stem cells of the present invention in a mammalian host, such as human, comprising introducing the stem cells, into the host. The invention further relates to methods of in vivo administration of a protein or gene of interest comprising transfecting a pluripotent stem cell with a construct comprising DNA which encodes a protein of interest and then introducing the stem cell into the host where the protein or gene of interest is expressed. The present also relates to methods of producing mesodermal, endodermal or ectodermal lineage-committed cells by culturing or transplantation of the pluripotent stem cells of the present invention.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2003:231619 USPATFULL

TITLE: Pluripotent embryonic-like stem cells, compositions, methods and uses thereof

INVENTOR(S): Young, Henry E., Macon, GA, UNITED STATES
Lucas, Paul A., Poughkeepsie, NY, UNITED STATES

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2003161817	A1	20030828	
APPLICATION INFO.:	US 2001-820320	A1	20010328	(9)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: KLAUBER & JACKSON, 411 Hackensack Avenue, Hackensack, NJ, 07601
NUMBER OF CLAIMS: 32
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 87 Drawing Page(s)
LINE COUNT: 10419
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L2 ANSWER 15 OF 57 USPATFULL on STN
TI Gel-infused sponges for tissue repair and augmentation
AB Gel-infused sponge matrix comprising an absorbable sponge material, a gel and an active ingredient are disclosed, as are methods of enhancing tissue repair, regeneration or augmentation using the gel-infused sponge.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
ACCESSION NUMBER: 2003:140153 USPATFULL
TITLE: Gel-infused sponges for tissue repair and augmentation
INVENTOR(S): Bentz, Hanne, Newark, CA, UNITED STATES
Garcia, A. Minerva, Chula Vista, CA, UNITED STATES
Hubbell, Jeffrey A., Zumikon, SWITZERLAND

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003095993	A1	20030522
APPLICATION INFO.:	US 2002-207439	A1	20020726 (10)

RELATED APPLN. INFO.: Continuation of Ser. No. WO 2001-US2837, filed on 26 Jan 2001, PENDING

	NUMBER	DATE
PRIORITY INFORMATION:	US 2000-178646P	20000128 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: FISH & NEAVE, 1251 AVENUE OF THE AMERICAS, 50TH FLOOR, NEW YORK, NY, 10020-1105
NUMBER OF CLAIMS: 30
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 3 Drawing Page(s)
LINE COUNT: 1082
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L2 ANSWER 16 OF 57 USPATFULL on STN
TI Trabecular bone-derived human mesenchymal stem cells
AB The present invention discloses an in vitro engineered osteochondral graft comprising a porous matrix block, more particularly, a porous polylactic acid polymer block, press-coated with mesenchymal stem cells (MSCs), wherein a cartilage layer is formed on the surface of the matrix block. This invention may be used for treating articular cartilage defects.

ACCESSION NUMBER: 2003:72422 USPATFULL
TITLE: Trabecular bone-derived human mesenchymal stem cells
INVENTOR(S): Noth, Ulrich, Wurzburg, GERMANY, FEDERAL REPUBLIC OF
Tuan, Rocky S., Chester Springs, PA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003050709	A1	20030313
APPLICATION INFO.:	US 2002-82705	A1	20020225 (10)

	NUMBER	DATE

	NUMBER		DATE
PRIORITY INFORMATION:	US 2001-270977P		20010223 (60)
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	APPLICATION		
LEGAL REPRESENTATIVE:	David S. Resnick, NIXON PEABODY LLP, 101 Federal Street, Boston, MA, 02110		
NUMBER OF CLAIMS:	28		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	5 Drawing Page(s)		
LINE COUNT:	852		

L2 ANSWER 17 OF 57 USPATFULL on STN

TI Cartilage repair and regeneration device and method

AB A method for the repair of a cartilagenous tissue defect, a cartilage repair device and a method of making a cartilage repair device are disclosed. In the method for the repair of a cartilagenous tissue defect, a device comprising a scaffold, for example an extracellular matrix material, is implanted into the defect, and a biological lubricant is administered to the defect. The device comprises a scaffold, for example a naturally occurring extracellular matrix material, and a biological lubricant.

	NUMBER	KIND	DATE
ACCESSION NUMBER:	2003:45709 USPATFULL		
TITLE:	Cartilage repair and regeneration device and method		
INVENTOR(S):	Plouhar, Pamela Lynn, South Bend, IN, UNITED STATES Malaviya, Prasanna, Ft. Wayne, IN, UNITED STATES Schwartz, Herbert Eugene, Ft. Wayne, IN, UNITED STATES		
PATENT INFORMATION:	US 2003033022	A1	20030213
APPLICATION INFO.:	US 2002-195606	A1	20020715 (10)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2002-388724P	20020614 (60)
	US 2001-305786P	20010716 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	BARNES & THORNBURG, 11 SOUTH MERIDIAN, INDIANAPOLIS, IN, 46204	
NUMBER OF CLAIMS:	60	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	5 Drawing Page(s)	
LINE COUNT:	1074	

L2 ANSWER 18 OF 57 USPATFULL on STN

TI Cartilage repair and regeneration scaffold and method

AB A method for the repair of a cartilaginous tissue defect, a cartilage repair device and a method of making a cartilage repair device are disclosed. In the method for the repair of a cartilaginous tissue defect, a device comprising a synthetic polymer is implanted into the defect, and a biological lubricant is administered to the defect. The device comprises a synthetic polymer and a biological lubricant.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

	NUMBER	KIND	DATE
ACCESSION NUMBER:	2003:45708 USPATFULL		
TITLE:	Cartilage repair and regeneration scaffold and method		
INVENTOR(S):	Plouhar, Pamela Lynn, South Bend, IN, UNITED STATES Schwartz, Herbert Eugene, Ft. Wayne, IN, UNITED STATES Malaviya, Prasanna, Ft. Wayne, IN, UNITED STATES		

PATENT INFORMATION: US 2003033021 A1 20030213
APPLICATION INFO.: US 2002-195334 A1 20020715 (10)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2002-388724P	20020614 (60)
	US 2001-305786P	20010716 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: BARNES & THORNBURG, 11 SOUTH MERIDIAN, INDIANAPOLIS, IN, 46204
NUMBER OF CLAIMS: 51
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 5 Drawing Page(s)
LINE COUNT: 890
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L2 ANSWER 19 OF 57 USPATFULL on STN
TI Bone morphogenic protein
AB The present invention relates to novel human **BMP** polypeptides and isolated nucleic acids containing the coding regions of the genes encoding such polypeptides. Also provided are vectors, host cells, antibodies, and recombinant methods for producing human **BMP** polypeptides. The invention further relates to diagnostic and therapeutic methods useful for diagnosing and treating disorders related to these novel human **BMP** polypeptides.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
ACCESSION NUMBER: 2003:44788 USPATFULL
TITLE: Bone morphogenic protein
INVENTOR(S): Young, Paul, Gaithersburg, MD, UNITED STATES
Ruben, Steven M., Olney, MD, UNITED STATES
PATENT ASSIGNEE(S): Human Genome Sciences, Inc., Rockville, MD, UNITED STATES, 20850 (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003032098	A1	20030213
APPLICATION INFO.:	US 2002-103197	A1	20020322 (10)

RELATED APPLN. INFO.: Continuation of Ser. No. US 1999-458690, filed on 10 Dec 1999, PENDING Continuation-in-part of Ser. No. WO 1999-US15783, filed on 14 Jul 1999, UNKNOWN

	NUMBER	DATE
PRIORITY INFORMATION:	US 1998-92922P	19980715 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE, ROCKVILLE, MD, 20850
NUMBER OF CLAIMS: 21
EXEMPLARY CLAIM: 1
LINE COUNT: 8264
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L2 ANSWER 20 OF 57 USPATFULL on STN
TI Device and method for regeneration and repair of cartilage lesions
AB Disclosed is a cartilage repair product that induces both cell ingrowth into a bioresorbable material and cell differentiation into cartilage tissue. Such a product is useful for regenerating and/or repairing both vascular and avascular cartilage lesions, particularly articular cartilage lesions, and even more particularly mensical tissue lesions, including tears as well as segmental defects. Also disclosed is a method of regenerating and repairing cartilage lesions using such a product.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER:	2003:33183 USPATFULL
TITLE:	Device and method for regeneration and repair of cartilage lesions
INVENTOR(S):	Atkinson, Brent, Lakewood, CO, United States Benedict, James J., Arvada, CO, United States
PATENT ASSIGNEE(S):	Sulzer Biologics Inc., Austin, TX, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6514514	B1	20030204
APPLICATION INFO.:	US 1999-250370		19990216 (9)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. WO 1998-EP5100, filed on 12 Aug 1998		

	NUMBER	DATE
PRIORITY INFORMATION:	EP 1997-810567	19970814

DOCUMENT TYPE:	Utility
FILE SEGMENT:	GRANTED
PRIMARY EXAMINER:	Baker, Anne-Marie
LEGAL REPRESENTATIVE:	Sheridan Ross P.C.
NUMBER OF CLAIMS:	58
EXEMPLARY CLAIM:	1
NUMBER OF DRAWINGS:	14 Drawing Figure(s); 8 Drawing Page(s)
LINE COUNT:	2122

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L2 ANSWER 21 OF 57 USPATFULL on STN

TI Compositions for regeneration and repair of cartilage lesions

AB Disclosed is a cartilage repair product that induces both cell ingrowth into a bioresorbable material and cell differentiation into cartilage tissue. Such a product is useful for regenerating and/or repairing both vascular and avascular cartilage lesions, particularly articular cartilage lesions, and even more particularly mensical tissue lesions, including tears as well as segmental defects. Also disclosed is a method of regenerating and repairing cartilage lesions using such a product.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER:	2003:26341 USPATFULL
TITLE:	Compositions for regeneration and repair of cartilage lesions
INVENTOR(S):	Atkinson, Brent, Lakewood, CO, United States Benedict, James J., Arvada, CO, United States
PATENT ASSIGNEE(S):	Sulzer Biologics, Inc., Austin, TX, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6511958	B1	20030128
APPLICATION INFO.:	US 2000-505209		20000216 (9)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. US 1999-250370, filed on 16 Feb 1999 Continuation-in-part of Ser. No. WO 1998-EP5100, filed on 12 Aug 1998		

DOCUMENT TYPE:	Utility
FILE SEGMENT:	GRANTED
PRIMARY EXAMINER:	Baker, Anne-Marie
LEGAL REPRESENTATIVE:	Sheridan Ross P.C.
NUMBER OF CLAIMS:	41
EXEMPLARY CLAIM:	1
NUMBER OF DRAWINGS:	14 Drawing Figure(s); 8 Drawing Page(s)
LINE COUNT:	3437

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L2 ANSWER 22 OF 57 USPATFULL on STN
TI Attachment of absorbable tissue scaffolds to scaffold fixation devices
AB The present invention relates to tissue scaffold implant devices useful in the repair and/or regeneration of diseased and/or damaged musculoskeletal tissue and that include a foam tissue scaffold component fixedly attached to a scaffold fixation component via partial encapsulation of the fixation component by the foam scaffold component, and to methods of making such tissue scaffold implant devices.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER:	2002:323683 USPATFULL			
TITLE:	Attachment of absorbable tissue scaffolds to scaffold fixation devices			
INVENTOR(S):	Contiliano, Joseph H., Stewartsville, NJ, UNITED STATES Hammer, Joseph John, Bridgewater, NJ, UNITED STATES Rezania, Alireza, Hillsborough, NJ, UNITED STATES Scopelianos, Angelo G., Whitehouse Station, NJ, UNITED STATES Vyakarnam, Murty Narayan, New York, NY, UNITED STATES Zimmerman, Mark Charles, East Brunswick, NJ, UNITED STATES			
	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2002183858	A1	20021205	
APPLICATION INFO.:	US 2001-874218	A1	20010605	(9)
DOCUMENT TYPE:	Utility			
FILE SEGMENT:	APPLICATION			
LEGAL REPRESENTATIVE:	AUDLEY A. CIAMPORCERO JR., JOHNSON & JOHNSON, ONE JOHNSON & JOHNSON PLAZA, NEW BRUNSWICK, NJ, 08933-7003			
NUMBER OF CLAIMS:	22			
EXEMPLARY CLAIM:	1			
NUMBER OF DRAWINGS:	13 Drawing Page(s)			
LINE COUNT:	1104			

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L2 ANSWER 23 OF 57 USPATFULL on STN
TI Chondrogenic potential of human bone marrow-derived CD105+ cells by **BMP**
AB Compositions of BMPs useful for cartilage repair and methods employing these compositions are disclosed. Compositions comprising non-tissue culture expanded cells isolated from bone marrow and treated with BMPs useful for cartilage repair and methods employing these compositions are also disclosed. The compositions are useful in the treatment of osteoarthritis, cartilage defects and in related tissue repair.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER:	2002:301577 USPATFULL			
TITLE:	Chondrogenic potential of human bone marrow-derived CD105+ cells by **BMP**			
INVENTOR(S):	Majumdar, Manas Kumar, Burlington, MA, UNITED STATES Morris, Elisabeth Ann, Sherborn, MA, UNITED STATES			
PATENT ASSIGNEE(S):	Wyeth, Madison, NJ, UNITED STATES, 07054-0874 (U.S. corporation)			
	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2002169122	A1	20021114	
APPLICATION INFO.:	US 2002-78808	A1	20020219	(10)
	NUMBER	DATE		

PRIORITY INFORMATION: US 2001-271186P 20010223 (60)
US 2001-333975P 20011129 (60)
DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: American Home Products Corporation, 5 Giralda Farms, Madison, NJ, 07940-0874
NUMBER OF CLAIMS: 31
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 9 Drawing Page(s)
LINE COUNT: 1174
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L2 ANSWER 24 OF 57 USPATFULL on STN
TI Bone morphogenic protein (**BMP**) polynucleotides, polypeptides, and antibodies
AB The present invention relates to novel human **BMP** polypeptides and isolated nucleic acids containing the coding regions of the genes encoding such polypeptides. Also provided are vectors, host cells, antibodies, and recombinant methods for producing human **BMP** polypeptides. The invention further relates to diagnostic and therapeutic methods useful for diagnosing and treating disorders related to these novel human **BMP** polypeptides.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
ACCESSION NUMBER: 2002:259593 USPATFULL
TITLE: Bone morphogenic protein (**BMP**) polynucleotides, polypeptides, and antibodies
INVENTOR(S): Ni, Jian, Germantown, MD, UNITED STATES
Ruben, Steven M., Olney, MD, UNITED STATES
Shi, Yanggu, Gaithersburg, MD, UNITED STATES
PATENT ASSIGNEE(S): Human Genome Sciences, Inc., Rockville, MD, UNITED STATES, 20850 (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002143170	A1	20021003
	US 6743613	B2	20040601
APPLICATION INFO.:	US 2002-67422	A1	20020207 (10)

RELATED APPLN. INFO.: Continuation of Ser. No. US 2000-685899, filed on 11 Oct 2000, PENDING Continuation-in-part of Ser. No. WO 2000-US9028, filed on 6 Apr 2000, UNKNOWN

	NUMBER	DATE
PRIORITY INFORMATION:	US 1999-130693P	19990423 (60)
	US 1999-131672P	19990429 (60)
	US 1999-147020P	19990803 (60)
	US 1999-152933P	19990909 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE, ROCKVILLE, MD, 20850
NUMBER OF CLAIMS: 22
EXEMPLARY CLAIM: 1
LINE COUNT: 10845
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L2 ANSWER 25 OF 57 USPATFULL on STN
TI Scaffold fixation device for use in **articular cartilage repair**
AB A device for attaching a tissue replacement scaffold to a bone has a platform positionable in substantially parallel relationship to the bone for retaining the tissue scaffold proximate to the bone. A post extends from the platform and is insertable into a hole formed in the bone. One

or more ribs extend from a side surface of the post along a portion of its length. The ribs are mounted on opposing flexible members and establish an interference fit relative to the hole in the bone tissue. The ribs are urged radially outwardly by the flexible members and have a sharp edge that grips the sides of the hole in the bone such that the ribs restrict withdrawal of the device. Vertical ribs may also be included to prevent rotation of the device within the hole in the bone.

ACCESSION NUMBER:	2002:222134 USPATFULL			
TITLE:	Scaffold fixation device for use in **articular cartilage repair**			
INVENTOR(S):	Overaker, David W., Annandale, NJ, UNITED STATES			
PATENT ASSIGNEE(S):	Ethicon, Inc. (U.S. corporation)			
	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2002120281	A1	20020829	
	US 6575986	B2	20030610	
APPLICATION INFO.:	US 2001-793029	A1	20010226	(9)
DOCUMENT TYPE:	Utility			
FILE SEGMENT:	APPLICATION			
LEGAL REPRESENTATIVE:	Ralph W. Selitto, Jr., P.O. Box 1477, Edison, NJ, 08818-1477			
NUMBER OF CLAIMS:	20			
EXEMPLARY CLAIM:	1			
NUMBER OF DRAWINGS:	3 Drawing Page(s)			
LINE COUNT:	371			

L2 ANSWER 26 OF 57 USPATFULL on STN
TI Tissue scaffold anchor for cartilage repair
AB A device for attaching a tissue replacement scaffold to a bone has a platform positionable in substantially parallel relationship to the bone for retaining the tissue scaffold proximate to the bone. A post extends from the platform and is insertable into a hole formed in the bone. One or more ribs extend from a side surface of the post along a portion of its length. The ribs have an increasing cross-sectional area to establish an increasing interference fit relative to the hole in the bone tissue. The ribs have a sharp edge that grips the sides of the hole in the bone such that the ribs restrict rotation or withdrawal of the device.

ACCESSION NUMBER:	2002:222127 USPATFULL			
TITLE:	Tissue scaffold anchor for cartilage repair			
INVENTOR(S):	Overaker, David W., Annandale, NJ, UNITED STATES Contiliano, Joseph H., Stewartsville, NJ, UNITED STATES			
PATENT ASSIGNEE(S):	Ethicon, Inc. (U.S. corporation)			
	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2002120274	A1	20020829	
	US 6743232	B2	20040601	
APPLICATION INFO.:	US 2001-793693	A1	20010226	(9)
DOCUMENT TYPE:	Utility			
FILE SEGMENT:	APPLICATION			
LEGAL REPRESENTATIVE:	Ralph W. Selitto Jr., P.O. Box 1477, Edison, NJ, 08818-1477			
NUMBER OF CLAIMS:	20			
EXEMPLARY CLAIM:	1			
NUMBER OF DRAWINGS:	4 Drawing Page(s)			
LINE COUNT:	380			

L2 ANSWER 27 OF 57 USPATFULL on STN
TI OSTEOARTHRITIS CARTILAGE REGENERATION
AB For repair of cartilage damaged as part of the degenerative effects of

osteoarthritis, the inventors have found that the human mesenchymal stem cell approach makes it possible to: (1) regenerate both shallow cartilage chondral defects and full thickness cartilage defects (osteochondral lesions); (2) broaden the suitable clinical population to routinely include middle-aged patients; (3) eliminate the use of autologous tissue grafts (mature cartilage and the periosteal covering) to repair an articular cartilage injury; (4) regenerate other types of injured cartilage such as patellar and spinal disk cartilage; (5) regenerate articular joint cartilage in older patients with osteoarthritis; and (6) form new cartilage and subchondral bone which fully integrate into the adjacent normal tissue.

ACCESSION NUMBER: 2002:205857 USPATFULL
TITLE: OSTEOARTHRITIS CARTILAGE REGENERATION
INVENTOR(S): GOLDBERG, VICTOR M., GATES HILLS, OH, UNITED STATES
CAPLAN, ARNOLD I., CLEVENLAND HEIGHTS, OH, UNITED STATES
BARRY, FRANCIS P., BALTIMORE, MD, UNITED STATES
FINK, DAVID J., SHAKER HEIGHTS, OH, UNITED STATES
MARSHAK, DANIEL R., LUTHERVILLE, MD, UNITED STATES
BURNS, JAMES S., ANNAPOLIS, MD, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002110544	A1	20020815
APPLICATION INFO.:	US 1998-78531	A1	19980513 (9)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: RAINA SEMIONOW, CARELLA, BYRNE, BAIN GILFILLAN, CECCHI, STEWART & OLSTEIN, 6BECKER FARM ROAD, ROSELAND, NJ, 07068
NUMBER OF CLAIMS: 32
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 3 Drawing Page(s)
LINE COUNT: 1318

L2 ANSWER 28 OF 57 USPATFULL on STN
TI Matrix-free osteogenic devices, implants and methods of use thereof
AB Provided herein are methods for inducing bone formation in a mammal sufficient to fill a defect defining a void, wherein osteogenic protein is provided alone or dispersed in a biocompatible non-rigid, amorphous carrier having no defined surfaces. The methods and devices provide injectable formulations for filling critical size defects, as well as for accelerating the rate and enhancing the quality of bone formation in non-critical size defects.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
ACCESSION NUMBER: 2002:172320 USPATFULL
TITLE: Matrix-free osteogenic devices, implants and methods of use thereof
INVENTOR(S): Rueger, David C., Southborough, MA, UNITED STATES
Tucker, Marjorie M., Holliston, MA, UNITED STATES
PATENT ASSIGNEE(S): STRYKER CORPORATION (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002091077	A1	20020711
	US 6426332	B2	20020730
APPLICATION INFO.:	US 2001-887901	A1	20010622 (9)

RELATED APPLN. INFO.: Continuation of Ser. No. US 1998-19339, filed on 5 Feb 1998, UNKNOWN
DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: FISH & NEAVE, 1251 AVENUE OF THE AMERICAS, 50TH FLOOR,

NEW YORK, NY, 10020-1105
NUMBER OF CLAIMS: 37
EXEMPLARY CLAIM: 1
LINE COUNT: 2801
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L2 ANSWER 29 OF 57 USPATFULL on STN
TI Use of insulin for the treatment of cartilagenous disorders
AB The present invention relates to methods for the treatment and repair of cartilage, including cartilage damaged by injury or cartilagenous disorders, including arthritis, comprising the administration of insulin and/or insulin variants. Optionally, the administration may be in combination with a cartilage agent (e.g., peptide growth factor, catabolism antagonist, osteo-, synovial, anti-inflammatory factor), in an extended- or sustained-release form. Alternatively, the method provides for the treatment and repair of cartilage damaged by injury or cartilagenous disorders comprising the administration of insulin and/or insulin in combination with standard surgical techniques. Alternatively, the method provides for the treatment and repair of cartilage damaged by injury or cartilagenous disorders comprising the administration of chondrocytes previously treated with an effective amount of insulin and/or insulin variant.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
ACCESSION NUMBER: 2002:112873 USPATFULL
TITLE: Use of insulin for the treatment of cartilagenous disorders
INVENTOR(S): Filvaroff, Ellen H., San Francisco, CA, UNITED STATES
Okumu, Franklin W., Oakland, CA, UNITED STATES
PATENT ASSIGNEE(S): GENENTECH, INC. (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2002058614	A1	20020516	
	US 6689747	B2	20040210	
APPLICATION INFO.:	US 2001-815229	A1	20010322	(9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2000-192103P	20000324 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: GENENTECH, INC., 1 DNA WAY, SOUTH SAN FRANCISCO, CA, 94080
NUMBER OF CLAIMS: 48
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 26 Drawing Page(s)
LINE COUNT: 5581
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L2 ANSWER 30 OF 57 USPATFULL on STN
TI Matrix-free osteogenic devices, implants and methods of use thereof
AB Provided herein are methods for inducing bone formation in a mammal sufficient to fill a defect defining a void, wherein osteogenic protein is provided alone or dispersed in a biocompatible non-rigid, amorphous carrier having no defined surfaces. The methods and devices provide injectable formulations for filling critical size defects, as well as for accelerating the rate and enhancing the quality of bone formation in non-critical size defects.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
ACCESSION NUMBER: 2001:142331 USPATFULL
TITLE: Matrix-free osteogenic devices, implants and methods of use thereof

INVENTOR(S): Rueger, David C., Southborough, MA, United States
Tucker, Marjorie M., Holliston, MA, United States
PATENT ASSIGNEE(S): Stryker Corporation, Kalamazoo, MI, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6281195	B1	20010828
APPLICATION INFO.:	US 1998-19339		19980205 (9)

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Russel, Jeffrey E.
LEGAL REPRESENTATIVE: Fish & Neave, Haley, Jr., James F., Mangasarian, Karen
NUMBER OF CLAIMS: 25
EXEMPLARY CLAIM: 1
LINE COUNT: 2501
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L2 ANSWER 31 OF 57 USPATFULL on STN
TI OSTEOGENIC DEVICES AND METHODS OF USE THEREOF FOR REPAIR OF ENDOCHONDRAL BONE, OSTEOCHONDRAL AND CHONDRAL DEFECTS
AB Disclosed herein are improved osteogenic devices and methods of use thereof for repair of bone and cartilage defects. The devices and methods promote accelerated formation of repair tissue with enhanced stability using less osteogenic protein than devices in the art. Defects susceptible to repair with the instant invention include, but are not limited to: critical size defects, non-critical size defects, non-union fractures, fractures, osteochondral defects, subchondral defects, and defects resulting from degenerative diseases such as osteochondritis dessicans.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
ACCESSION NUMBER: 2001:139603 USPATFULL
TITLE: OSTEOGENIC DEVICES AND METHODS OF USE THEREOF FOR REPAIR OF ENDOCHONDRAL BONE, OSTEOCHONDRAL AND CHONDRAL DEFECTS
INVENTOR(S): RUEGER, DAVID C., SOUTHBOROUGH, MA, United States
TUCKER, MARJORIE A., HOLLISTON, MA, United States
CHANG, AN-CHENG, WESTBOROUGH, MA, United States

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2001016646	A1	20010823
APPLICATION INFO.:	US 1998-45331	A1	19980320 (9)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: PATENT ADMINISTATOR, TESTA HURWITZ & THIBEAULT, LLP, HIGH STREET TOWER, 125 HIGH STREET, BOSTON, MA, 02110
NUMBER OF CLAIMS: 49
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 2 Drawing Page(s)
LINE COUNT: 5269
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L2 ANSWER 32 OF 57 USPATFULL on STN
TI IMPROVED OSTEOGENIC DEVICES AND METHODS OF USE THEREOF FOR REPAIR OF ENDOCHONDRAL BONE AND OSTEOCHONDRAL DEFECTS
AB Disclosed herein are improved osteogenic devices and methods of use thereof for repair of bone and cartilage defects. The devices and methods promote accelerated formation of repair tissue with enhanced stability using less osteogenic protein than devices in the art. Defects susceptible to repair with the instant invention include, but are not limited to: critical size defects, non-critical size defects, non-union fractures, fractures, osteochondral defects, subchondral defects, and

defects resulting from degenerative diseases such as osteochondritis dessicans.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER:	2001:134213 USPATFULL
TITLE:	IMPROVED OSTEOGENIC DEVICES AND METHODS OF USE THEREOF FOR REPAIR OF ENDOCHONDRAL BONE AND OSTEOCHONDRAL DEFECTS
INVENTOR(S):	RUEGER, DAVID C, SOUTHBOROUGH, MA, United States TUCKER, MARJORIE A, HOLLISTON, MA, United States

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2001014662	A1	20010816	
APPLICATION INFO.:	US 1997-822186	A1	19970320	(8)

DOCUMENT TYPE:	Utility
FILE SEGMENT:	APPLICATION
LEGAL REPRESENTATIVE:	JAMES F. HALEY, FISH & NEAVE, 1251 AVENUE OF THE AMERICAS, NEW YORK, NY, 100201104
NUMBER OF CLAIMS:	34
EXEMPLARY CLAIM:	1
NUMBER OF DRAWINGS:	2 Drawing Page(s)
LINE COUNT:	4425

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L2 ANSWER 33 OF 57 USPATFULL on STN

TI Cartilage repair unit

AB A bio-absorbable cartilage repair system is provided for regenerating damaged or destroyed articular cartilage on a joint surface of a bone by establishing a chondrogenic growth-supporting matrix between an area of damaged or destroyed articular cartilage that has been removed and an adjacent healthy area of articular cartilage and subchondral cancellous bone. The system is an assembly of a delivery unit and a porous insert. The delivery unit is formed of bio-absorbable material and configured and dimensioned to be mounted in both an area of damaged or destroyed articular cartilage that has been removed and an adjacent healthy area of articular cartilage and cancellous bone. The delivery unit has a central body and a plurality of radially extending, flexible support arms projecting outwardly from the central body and configured and dimensioned to support the insert at least partially thereover. The insert is supported by the delivery unit, formed of bio-absorbable material, and establishes communication between the removed area and the adjacent healthy area for a chondrogenic growth-supporting matrix.

ACCESSION NUMBER:	2001:119400 USPATFULL
TITLE:	Cartilage repair unit
INVENTOR(S):	Schwartz, Robert E., Old Westbury, NY, United States Grande, Daniel A., Seacliff, NY, United States

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2001010023	A1	20010726	
	US 6468314	B2	20021022	
APPLICATION INFO.:	US 2001-801450	A1	20010308	(9)

RELATED APPLN. INFO.:	Division of Ser. No. US 1999-325957, filed on 4 Jun 1999, PENDING
DOCUMENT TYPE:	Utility
FILE SEGMENT:	APPLICATION
LEGAL REPRESENTATIVE:	BARNES & THORNBURG, 11 SOUTH MERIDIAN, INDIANAPOLIS, IN, 46204
NUMBER OF CLAIMS:	45
EXEMPLARY CLAIM:	1
NUMBER OF DRAWINGS:	19 Drawing Page(s)
LINE COUNT:	1545

L2 ANSWER 34 OF 57 USPATFULL on STN
TI Cartilage repair unit
AB A bio-absorbable cartilage repair system is provided for regenerating damaged or destroyed articular cartilage on a joint surface of a bone by establishing a chondrogenic growth-supporting matrix between an area of damaged or destroyed articular cartilage that has been removed and an adjacent healthy area of articular cartilage and subchondral cancellous bone. The system is an assembly of a delivery unit and a porous insert. The delivery unit is formed of bio-absorbable material and configured and dimensioned to be mounted in both an area of damaged or destroyed articular cartilage that has been removed and an adjacent healthy area of articular cartilage and cancellous bone. The delivery unit has a central body and a plurality of radially extending, flexible support arms projecting outwardly from the central body and configured and dimensioned to support the insert at least partially thereover. The insert is supported by the delivery unit, formed of bio-absorbable material, and establishes communication between the removed area and the adjacent healthy area for a chondrogenic growth-supporting matrix.

ACCESSION NUMBER:	2001:97169 USPATFULL		
TITLE:	Cartilage repair unit		
INVENTOR(S):	Schwartz, Robert E., Old Westbury, NY, United States Grande, Daniel A., Seacliff, NY, United States		
PATENT ASSIGNEE(S):	DePuy Orthopaedics, Inc., Warsaw, IN, United States (U.S. corporation)		
	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6251143	B1	20010626
APPLICATION INFO.:	US 1999-325957		19990604 (9)
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	GRANTED		
PRIMARY EXAMINER:	Mancene, Gene		
ASSISTANT EXAMINER:	Priddy, Michael B.		
LEGAL REPRESENTATIVE:	Barnes & Thornburg		
NUMBER OF CLAIMS:	30		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	47 Drawing Figure(s); 19 Drawing Page(s)		
LINE COUNT:	1440		

L2 ANSWER 35 OF 57 USPATFULL on STN
TI Frazzled nucleotide sequences and expression products
AB Purified Frazzled proteins, including WG67-16, WG67-19 and WA628, and processes for producing them are disclosed. DNA molecules encoding the Frazzled proteins, including WG67-16, WG67-19 and WA628, are also disclosed. The proteins may be used in modulating the binding of Wnt genes to their receptor. They are useful in the modulation of cellular formation, growth, differentiation, proliferation and/or maintenance of a variety of adult and embryonic tissues and organs.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER:	2000:174377 USPATFULL
TITLE:	Frazzled nucleotide sequences and expression products
INVENTOR(S):	Racie, Lisa, Acton, MA, United States Lavallie, Edward, Tewksbury, MA, United States Paulsen, Janet, Watertown, MA, United States Sive, Hazel, Newton, MA, United States Sun, Benjamin, Cambridge, MA, United States
PATENT ASSIGNEE(S):	Genetics Institute, Inc., Cambridge, MA, United States (U.S. corporation) Whitehead Institute for Biomedical Research, Cambridge, MA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6165748		20001226
APPLICATION INFO.:	US 1997-893654		19970711 (8)

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Spector, Lorraine
ASSISTANT EXAMINER: Kaufman, Claire M.
LEGAL REPRESENTATIVE: Gyure, Barbara A.
NUMBER OF CLAIMS: 39
EXEMPLARY CLAIM: 7
LINE COUNT: 2120
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L2 ANSWER 36 OF 57 USPATFULL on STN
TI Apparatus and methods for articular cartilage defect repair
AB A bone plug removal and emplacement tool includes a cylindrical cutting element having a proximal cutting edge and a cutting tooth. The outer surface of the cutting element can include an integral shoulder (e.g., in lieu of a replaceable outer sheath) that is spaced-apart from the proximal cutting edge and that engages the surface of the bone to define a depth stop for the cutting edge. An additional cylindrical element can be disposed within the cutting element. The proximal end of that additional element, which is referred to as a "harvester," is substantially aligned with the proximal end of the cutting element to receive a plug cut from the bone. The harvester can be slidably withdrawn from the cutting element to facilitate transplating the bone plug at another location. For this purpose, a stem or plunger can be slidably inserted and moved in the harvester to dislodge the plug.

ACCESSION NUMBER: 2000:9340 USPATFULL
TITLE: Apparatus and methods for articular cartilage defect repair
INVENTOR(S): Hart, Rickey D., Plainville, MA, United States
Barber, F. Alan, Frisco, TX, United States
Chow, James C., Mount Vernon, IL, United States
PATENT ASSIGNEE(S): Innovasive Devices, Inc., Marlborough, MA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6017348		20000125
APPLICATION INFO.:	US 1997-866830		19970530 (8)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1995-399428, filed on 7 Mar 1995, now patented, Pat. No. US 5782835
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Buiz, Michael
ASSISTANT EXAMINER: Reip, David O.
LEGAL REPRESENTATIVE: Choate, Hall & Stewart
NUMBER OF CLAIMS: 24
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 20 Drawing Figure(s); 14 Drawing Page(s)
LINE COUNT: 921

L2 ANSWER 37 OF 57 USPATFULL on STN
TI Cartilage induction by bone morphogenetic proteins
AB Compositions of proteins with cartilaginous tissue inducing and maintenance activity are disclosed. The compositions are useful in the treatment of osteoarthritis, cartilage defects and in related tissue repair.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
ACCESSION NUMBER: 1999:56457 USPATFULL

TITLE: Cartilage induction by bone morphogenetic proteins
INVENTOR(S): Hattersley, Gary, Cambridge, MA, United States
Wolfman, Neil M., Dover, MA, United States
Morris, Elisabeth A., Southboro, MA, United States
Rosen, Vicki A., Chestnut Hill, MA, United States
PATENT ASSIGNEE(S): Genetics Institute, Inc., Cambridge, MA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5902785		19990511
APPLICATION INFO.:	US 1996-646193		19960507 (8)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1995-467110, filed on 6 Jun 1995, now abandoned
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Kemmerer, Elizabeth
LEGAL REPRESENTATIVE: Lazar, Steven R., Gyure, Barbara A.
NUMBER OF CLAIMS: 6
EXEMPLARY CLAIM: 1
LINE COUNT: 811
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L2 ANSWER 38 OF 57 USPATFULL on STN
TI Compositions comprising bone morphogenic proteins and truncated parathyroid hormone related peptide and methods of inducing cartilage by administration of same
AB Compositions of proteins with chondrocyte and cartilaginous tissue inducing activity, as well as method of using those compositions, are disclosed. The compositions comprise one or more proteins of the transforming growth factor-β (TGF-β) superfamily of proteins, particularly bone morphogenetic proteins (BMPs), in combination with parathyroid hormone related polypeptide (PTHrP) or an equivalent PTH-like polypeptide. The compositions and methods are useful in the treatment of osteoarthritis, cartilage defects and in related tissue repair.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
ACCESSION NUMBER: 1998:154240 USPATFULL
TITLE: Compositions comprising bone morphogenic proteins and truncated parathyroid hormone related peptide and methods of inducing cartilage by administration of same
INVENTOR(S): Hattersley, Gary, 10 Rogers St., #303, Cambridge, MA, United States 02142
Rosen, Vicki A., 2 Cedar Rd., Chestnut Hill, MA, United States 02167

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5846931		19981208
APPLICATION INFO.:	US 1997-926942		19970910 (8)

RELATED APPLN. INFO.: Continuation of Ser. No. US 1996-622101, filed on 26 Mar 1996, now patented, Pat. No. US 5700774
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Kemmerer, Elizabeth
LEGAL REPRESENTATIVE: Lazar, Steven R.
NUMBER OF CLAIMS: 7
EXEMPLARY CLAIM: 1
LINE COUNT: 637
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L2 ANSWER 39 OF 57 USPATFULL on STN
TI Apparatus and methods for articular cartilage defect repair

AB A bone plug removal tool is described. The tool includes a cylindrical cutting element having an external surface and having an internal surface defining an internal bore extending along a longitudinal axis of the cutting element from a proximal end to a distal end. A cutting tooth is located at the proximal end of the cutting element and extends into the internal bore. A replaceable outer cylindrical sheath is arranged concentrically around the external surface of the cylindrical cutting element.

A bone plug emplacement tool to be used in conjunction the removal tool is also disclosed. The emplacement tool includes a cylindrical element having an internal surface defining an internal bore extending along a longitudinal axis of the element from a proximal end. The internal surface further defines an internal step adjacent a distal end of the element. A stem is disposed for co-axial movement within the element, the stem having a proximal end disposed within the internal bore. A shoulder is defined in the stem for mating engagement with the internal distal step of the element in order to limit distal movement of the stem within the internal bore.

A kit incorporating the various tools is disclosed. The kit, for repair of an articular cartilage, includes the bone plug removal tool of the invention, an elongated plunger for insertion into the proximal end of the cutting element and for coaxial movement within it, the plunger for displacing a bone plug from the distal end of cutting element and the bone emplacement tool of the invention. Kits may also include a drill bit containing a depth stop. A method of repairing a defective articular cartilage is also described.

ACCESSION NUMBER:	1998:85237 USPATFULL
TITLE:	Apparatus and methods for articular cartilage defect repair
INVENTOR(S):	Hart, Rickey D., Plainville, MA, United States Barber, F. Alan, Frisco, TX, United States Chow, James C., Mount Vernon, IL, United States
PATENT ASSIGNEE(S):	Innovasive Devices, Inc., Marlborough, MA, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5782835		19980721	
APPLICATION INFO.:	US 1995-399428		19950307	(8)

DOCUMENT TYPE:	Utility
FILE SEGMENT:	Granted
PRIMARY EXAMINER:	Buiz, Michael
ASSISTANT EXAMINER:	Woo, Julian W.
LEGAL REPRESENTATIVE:	Choate, Hall & Stewart
NUMBER OF CLAIMS:	24
EXEMPLARY CLAIM:	1
NUMBER OF DRAWINGS:	15 Drawing Figure(s); 6 Drawing Page(s)
LINE COUNT:	738

L2 ANSWER 40 OF 57 USPATFULL on STN
TI Cartilage repair unit
AB A bio-absorbable cartilage repair system for regenerating damaged or destroyed articular cartilage on the surface of a bone by establishing a chondrogenic growth-supporting matrix between an area of removed damaged or destroyed articular cartilage and the adjacent healthy cancellous bone. The system is at least one assembly of a bio-absorbable delivery unit, configured and dimensioned to be mounted in both the removed area and the adjacent healthy area, and a porous bio-absorbable insert supported by and in the delivery unit and establishing communication between the removed area and the adjacent healthy area for a chondrogenic growth-supporting matrix. The insert preferably includes a

repair factor (e.g., a growth factor, an attachment factor, or both) releasably disposed in the insert to assist in establishing the chondrogenic growth-supporting matrix.

ACCESSION NUMBER: 1998:71948 USPATFULL
TITLE: Cartilage repair unit
INVENTOR(S): Schwartz, Robert Elliott, Old Westbury, NY, United States
Grande, Jr., Daniel Anthony, Seacliff, NY, United States
PATENT ASSIGNEE(S): Matrix Biotechnologies, Inc., Melville, NY, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5769899		19980623
APPLICATION INFO.:	US 1996-698468		19960815 (8)

RELATED APPLN. INFO.: Continuation of Ser. No. US 1994-289387, filed on 12 Aug 1994, now abandoned
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Milano, Michael J.
LEGAL REPRESENTATIVE: Amster, Rothstein & Ebenstein
NUMBER OF CLAIMS: 42
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 6 Drawing Figure(s); 4 Drawing Page(s)
LINE COUNT: 767

L2 ANSWER 41 OF 57 USPATFULL on STN
TI Cartilage repair unit and method of assembling same
AB A method of assembling an improved bio-absorbable cartilage repair system includes the step of directly inserting the insert into a cavity in the delivery unit so as to leave a top of the insert exposed. A flexible, porous fabric piece, consisting substantially of bio-absorbable material, is then applied over the exposed top of the inserted insert and through a plurality of the windows of the delivery unit sidewall. The fabric piece includes a central body portion configured and dimensioned to substantially cover the exposed top of the inserted insert, and a plurality of leg portions extending outwardly from the body portion, the leg portions being configured and dimensioned to fit through the windows. Substantially all of each leg portion is next pulled through a respective window to cause the body portion to deform the inserted insert into assuming the shape of the cavity therebelow. Finally, the leg portions projecting from the windows are trimmed. The remaining fabric piece retains the inserted insert within the delivery unit. Preferably, the pulling also causes the body portion to deform the exposed top of the inserted insert into assuming a desired shape or contour.

ACCESSION NUMBER: 1998:50964 USPATFULL
TITLE: Cartilage repair unit and method of assembling same
INVENTOR(S): Schwartz, Robert E., Manhasset, NY, United States
PATENT ASSIGNEE(S): Matrix Biotechnologies, Inc., Melville, NY, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5749874		19980512
APPLICATION INFO.:	US 1996-774390		19961230 (8)

RELATED APPLN. INFO.: Continuation of Ser. No. US 1996-659174, filed on 5 Jun 1996, now abandoned which is a continuation-in-part of Ser. No. US 1995-384849, filed on 7 Feb 1995, now patented, Pat. No. US 5632745
DOCUMENT TYPE: Utility

FILE SEGMENT: Granted
PRIMARY EXAMINER: Tucker, Guy V.
LEGAL REPRESENTATIVE: Amster, Rothstein & Ebenstein
NUMBER OF CLAIMS: 13
EXEMPLARY CLAIM: 9
NUMBER OF DRAWINGS: 12 Drawing Figure(s); 7 Drawing Page(s)
LINE COUNT: 822

L2 ANSWER 42 OF 57 USPATFULL on STN
TI Compositions comprising bone morphogenic proteins and truncated parathyroid hormone related peptide, and methods of inducing cartilage by administration of same
AB Compositions of proteins with chondrocyte and cartilaginous tissue inducing activity, as well as method of using those compositions, are disclosed. The compositions comprise one or more proteins of the transforming growth factor-β (TGF-β) superfamily of proteins, particularly bone morphogenetic proteins (BMPs), in combination with parathyroid hormone related polypeptide (PTHrP) or an equivalent PTH-like polypeptide. The compositions and methods are useful in the treatment of osteoarthritis, cartilage defects and in related tissue repair.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
ACCESSION NUMBER: 97:120591 USPATFULL
TITLE: Compositions comprising bone morphogenic proteins and truncated parathyroid hormone related peptide, and methods of inducing cartilage by administration of same
INVENTOR(S): Hattersley, Gary, Cambridge, MA, United States
Rosen, Vicki A., Chestnut Hill, MA, United States
PATENT ASSIGNEE(S): Genetics Institute, Inc., Cambridge, MA, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5700774		19971223	
APPLICATION INFO.:	US 1996-622101		19960326	(8)

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Fitzgerald, David L.
ASSISTANT EXAMINER: Kemmerer, Elizabeth C.
LEGAL REPRESENTATIVE: Meinert, M. C., Lazar, S.
NUMBER OF CLAIMS: 17
EXEMPLARY CLAIM: 1
LINE COUNT: 668
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L2 ANSWER 43 OF 57 USPATFULL on STN
TI Surgical implantation of cartilage repair unit
AB A method of surgically implanting into a site with cancellous bone a bio-absorbable cartilage repair system including an assembly. The method includes the steps of partially preparing the site to receive the assembly by removing at least a portion of the damaged or destroyed articular cartilage, and then removably fixing the forward tip of a guide wire in the cancellous bone under the removed articular cartilage. The guide wire is then utilized to further prepare the site to receive the assembly by drilling and countersinking the subchondral cancellous bone and to seat the assembly into the drilled and countersunk subchondral cancellous bone until the assembly is flush with the surrounding articular surface. The guide wire is then removed.

ACCESSION NUMBER: 97:44518 USPATFULL
TITLE: Surgical implantation of cartilage repair unit
INVENTOR(S): Schwartz, Robert E., Old Westbury, NY, United States
PATENT ASSIGNEE(S): R&D Biologicals, Inc., Manhasset, NY, United States

(U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5632745		19970527	
APPLICATION INFO.:	US 1995-384849		19950207	(8)

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Tucker, Guy V.
LEGAL REPRESENTATIVE: Amster, Rothstein & Ebenstein
NUMBER OF CLAIMS: 21
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 25 Drawing Figure(s); 13 Drawing Page(s)
LINE COUNT: 1043

L2 ANSWER 44 OF 57 USPATFULL on STN
TI Methods and compositions for the treatment and repair of defects or lesions in cartilage or bone
AB Methods and compositions are provided for the treatment and repair of defects in the cartilage or bone of humans and other animals as in full-thickness defects in joints. The defect in bone is filled with a matrix having pores large enough to allow cells to populate the matrix and to form blood vessels. The matrix filling the bone defect contains an angiogenic factor and also contains an osteogenic factor in an appropriate delivery system. To induce cartilage formation, a defect in cartilage is filled with a matrix having pores sufficiently large to allow cartilage repair cells to populate the matrix. The matrix filling the defect in cartilage contains a proliferation agent and also contains a transforming factor in an appropriate delivery system. The matrix may also contain a chemotactic agent to attract cartilage repair cells. In a full-thickness defect, the defect sites in bone and cartilage are separated from each other by a membrane, which is sealed to the cartilage-bone-junction and which prevents blood vessels and associated cells from penetrating from one site to the other.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
ACCESSION NUMBER: 93:104945 USPATFULL
TITLE: Methods and compositions for the treatment and repair of defects or lesions in cartilage or bone
INVENTOR(S): Hunziker, Ernst B., Riedholz, Switzerland
PATENT ASSIGNEE(S): Shaw, Robert Francis, San Francisco, CA, United States (U.S. individual)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5270300		19931214	
APPLICATION INFO.:	US 1991-756164		19910906	(7)

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Griffin, Ronald W.
LEGAL REPRESENTATIVE: Mullowney, Edward F., Massaro, Jane A.
NUMBER OF CLAIMS: 26
EXEMPLARY CLAIM: 1,10
LINE COUNT: 1089
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L2 ANSWER 45 OF 57 EMBASE on STN
TI Repair of articular cartilage defects with osteogenic protein-1 (**BMP**-7) in dogs.
AB Background: Articular cartilage injury has a poor prognosis for repair. Mesenchymal cells, when exposed to osteogenic proteins and other cytokines, can differentiate into cells that behave phenotypically as chondrocytes. In this study, we examined the ability of recombinant human

osteogenic protein-1 (rhOP-1 or rhBMP-7) to elicit the repair of osteochondral defects in dogs. Methods: Bilateral osteochondral defects that were 5 mm in diameter by 6 mm deep were surgically created in the medial femoral condyles of sixty-five adult dogs. rhOP-1-treated (100 mg of a 3.5-mg rhOP-1/g bovine bone-derived Type-I collagen device) and control defects (untreated or treated with 100 mg bovine bone-derived collagen implants) were evaluated grossly and histologically at six, twelve, sixteen, twenty-six, and fifty-two weeks postoperatively. The influence of protected initial weight-bearing and surgical placement of periosteal flaps was also evaluated. Results: Gross and histologic grading of the defect repair indicated improvement in the rhOP-1-treated defects compared with that in the controls. Grossly, the repair tissue in the rhOP-1-treated defects was continuous with the adjacent intact cartilage and appeared translucent. By comparison, the repair tissue in the control defects was discontinuous and opaque or inhomogeneous in nature. Histologically, maturing cartilage similar in appearance to the intact articular cartilage was present in the rhOP-1-treated defects. Cartilage at the defect interface was minimally degraded. The control defects were filled primarily with fibrous tissue and fibrocartilage. Significant differences based upon treatment type were observed at twelve weeks, sixteen weeks, and for all time-periods combined ($p = 0.0385$, $p = 0.0070$, and $p = 0.0026$, respectively). Conclusion: rhOP-1 (rhBMP-7) induced hyaline cartilage-like repair of full-thickness osteochondral defects in a dog model. Differences in cartilage repair were maintained at fifty-two weeks postoperatively with no significant degradation of the rhOP-1-induced repair tissue. Clinical Relevance: The dog osteochondral defect model is a challenging one that reflects the difficulties of eliciting **articular cartilage repair** that are seen in the clinical setting. The results of this study indicate that rhOP-1 may improve the repair of articular cartilage, and they demonstrate the importance of further investigation to characterize the effects of growth factors on the cartilage repair process.

ACCESSION NUMBER: 2003319583 EMBASE
TITLE: Repair of articular cartilage defects with osteogenic protein-1 (**BMP**-7) in dogs.

AUTHOR: Cook S.D.; Patron L.P.; Salkeld S.L.; Rueger D.C.
CORPORATE SOURCE: Dr. S.D. Cook, Department of Orthopaedic Surgery, Tulane University School of Medicine, 1430 Tulane Avenue, New Orleans, LA 70112, United States. scook2@tulane.edu

SOURCE: Journal of Bone and Joint Surgery - Series A, (1 Aug 2003) 85/SUPPL. 3 (116-123).
Refs: 26
ISSN: 0021-9355 CODEN: JBJSA3
COUNTRY: United States
DOCUMENT TYPE: Journal; Conference Article
FILE SEGMENT: 027 Biophysics, Bioengineering and Medical Instrumentation
030 Pharmacology
033 Orthopedic Surgery
037 Drug Literature Index
039 Pharmacy
LANGUAGE: English
SUMMARY LANGUAGE: English

L2 ANSWER 46 OF 57 EMBASE
on STN

TI **Articular cartilage repair** by gene therapy using growth factor-producing mesenchymal cells.

AB Objective. To investigate the repair of partialthickness lesions in rat articular cartilage by combining cell transplantation with transfer of growth factor complementary DNA (cDNA). Methods. Mesenchymal cells isolated from rib perichondrium were infected ex vivo with adenoviral vectors carrying bone morphogenetic protein 2 (**BMP**-2) or insulin-like growth factor 1 (IGF-1) cDNA. The cells were suspended in

fibrin glue and applied to mechanically induced partial-thickness cartilage lesions in the patellar groove of the rat femur. The filling of the defects was quantified and the quality and integration of the newly formed tissue were assessed by histochemical and immunohistochemical methods. Uninfected cells or cells infected with a LacZ reporter gene vector served as controls. Results. Transplanted cells were able to attach to the wounded articular cartilage and were not displaced from the lesions by joint movement. Cells infected with both adenoviral vectors AdBMP-2 and AdIGF-1 produced repair cartilage of hyaline morphology containing a type II collagen-positive but type I collagen-negative proteoglycan-rich matrix that restored the articular surface in most lesions. Uninfected cells either failed to fill up the defects or formed fibrous tissue mainly composed of type I collagen. Excessive cells were partially dislocated to the joint margins, leading to osteophyte formation there if AdBMP-2-infected cells were used. These adverse effects, however, were not seen with AdIGF-1-infected cells. Conclusion. Stimulation of perichondriumderived mesenchymal cells by transfer of growth factor cDNA in a partial-thickness defect model allows for satisfactory cartilage restoration by a repair tissue comparable with hyaline articular cartilage.

ACCESSION NUMBER: 2003099395 EMBASE
TITLE: **Articular cartilage repair** by gene therapy using growth factor-producing mesenchymal cells.
AUTHOR: Gelse K.; Von der Mark K.; Aigner T.; Park J.; Schneider H.
CORPORATE SOURCE: Dr. H. Schneider, University of Erlangen-Nuernberg, Dept. of Experimental Medicine I, Gluckstrasse 6, 91054 Erlangen, Germany. hschneid@molmed.uni-erlangen.de
SOURCE: Arthritis and Rheumatism, (1 Feb 2003) 48/2 (430-441).
Refs: 43
ISSN: 0004-3591 CODEN: ARHEAW
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 022 Human Genetics
031 Arthritis and Rheumatism
037 Drug Literature Index
LANGUAGE: English
SUMMARY LANGUAGE: English

L2 ANSWER 47 OF 57 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED. on STN
TI Stimulation of **articular cartilage repair** in established arthritis by local administration of transforming growth factor-β into murine knee joints.
AB A severe consequence of rheumatoid arthritis is depletion of proteoglycans (PGs) from articular cartilage leading to functional impairment of this tissue. We investigated whether local administration of anabolic factors (transforming growth factors-β1 and -β2 [TGF-β1 and -β2, respectively] and bone morphogenetic protein-2 (**BMP**-2) into joints could stimulate cartilage repair during arthritis. A unilateral arthritis was induced in mice by intra-articular injection of zymosan. Starting on Day 4 after the induction of arthritis, three injections of TGF-β1 (200 ng) were given (Days 4, 6, and 8). On Day 11, articular cartilage PG synthesis was measured by 35S-sulfate incorporation, and histologic knee joint sections were prepared, which were used to analyze cartilage PG content by quantification of safranin O staining. Additionally, histologic sections were used to analyze inflammation and chondrophyte-formation. Local administration of TGF-β1 did not modify inflammation but clearly stimulated PG synthesis and restored PG content of depleted cartilage. TGF-β2 appeared to be as potent as TGF-β1 in the stimulation of cartilage repair, and both TGF-β isoforms also stimulated the formation of chondrophytes in this rodent model. In contrast to TGF-β, three intra-articular injections with 200 ng **BMP**-2 did not stimulate

the repair process. In summary, this study demonstrates for the first time that local administration of TGF-β into arthritic joints stimulates the replenishment of PGs in depleted cartilage.

ACCESSION NUMBER: 1998080792 EMBASE
TITLE: Stimulation of **articular cartilage repair** in established arthritis by local administration of transforming growth factor-β into murine knee joints.
AUTHOR: Glansbeek H.L.; Van Beuningen H.M.; Vitters E.L.; Van der Kraan P.M.; Van den Berg W.B.
CORPORATE SOURCE: Dr. H.L. Glansbeek, Department of Rheumatology, University Hospital Nijmegen, Geert Grooteplein zuid 8, 6525 GA Nijmegen, Netherlands
SOURCE: Laboratory Investigation, (1998) 78/2 (133-142).
Refs: 66
ISSN: 0023-6837 CODEN: LAINAW
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 031 Arthritis and Rheumatism
037 Drug Literature Index
LANGUAGE: English
SUMMARY LANGUAGE: English

L2 ANSWER 48 OF 57 WPIDS COPYRIGHT 2004 THE THOMSON CORP on STN
TI Composition useful for inducing cartilaginous tissue formation and maintenance comprises bone morphogenetic proteins.
AN 2002-667109 [71] WPIDS
AB WO 200267978 A UPAB: 20040823
NOVELTY - A composition comprises a bone morphogenetic proteins (**BMP**).

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for following:

(1) a composition comprising multipotential mesenchymal cells (MMCs) and a **BMP** for **articular cartilage repair**;

(2) a composition comprising interleukin (IL)-11 and **BMP**-9 or non-tissue culture expanded cells isolated from bone marrow and further comprises a matrix, and bone and/or cartilage including factor for inducing chondrogenesis; and

(3) a composition comprising non-tissue culture expanded cells isolated from bone marrow and a bone and/or cartilage including factor for tissue repair.

ACTIVITY - Antiarthritic; Osteopathic; Antirheumatic.

MECHANISM OF ACTION - Interleukin-1 and tumor necrosis factor blocker.

USE - For inducing formation and/or maintenance of chondrocytes or cartilaginous tissue; for treating arthritis, or other cartilaginous tissue defect; for blocking or suppressing the inhibitory effect of interleukin (IL)-1; for treating articular cartilage defect damage (all claimed); and also in the treatment of osteoarthritis and rheumatoid arthritis.

ADVANTAGE - The composition widens the clinical applications of cell based tissue repair and procedures, which minimizes the vitro manipulation of cells.

Dwg.0/4

ACCESSION NUMBER: 2002-667109 [71] WPIDS
DOC. NO. CPI: C2002-187410
TITLE: Composition useful for inducing cartilaginous tissue formation and maintenance comprises bone morphogenetic proteins.
DERWENT CLASS: B04
INVENTOR(S): MAJUMDAR, M K; MORRIS, E A
PATENT ASSIGNEE(S): (GEMY) GENETICS INST LLC; (AMHP) WYETH
COUNTRY COUNT: 101
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2002067978	A1	20020906	(200271)*	EN	50
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZM ZW					
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG UZ VN YU ZA ZM ZW					
US 2002169122	A1	20021114	(200277)		
EP 1379268	A1	20040114	(200410)	EN	
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR					
AU 2002252002	A1	20020912	(200433)		
JP 2004521128	W	20040715	(200446)		76
ZA 2003006433	A	20040630	(200448)		57

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2002067978	A1	WO 2002-US4880	20020219
US 2002169122	A1 Provisional	US 2001-271186P	20010223
	Provisional	US 2001-333975P	20011129
		US 2002-78808	20020219
EP 1379268	A1	EP 2002-721048	20020219
		WO 2002-US4880	20020219
AU 2002252002	A1	AU 2002-252002	20020219
JP 2004521128	W	JP 2002-567343	20020219
		WO 2002-US4880	20020219
ZA 2003006433	A	ZA 2003-6433	20030819

FILING DETAILS:

PATENT NO	KIND	PATENT NO
EP 1379268	A1 Based on	WO 2002067978
AU 2002252002	A1 Based on	WO 2002067978
JP 2004521128	W Based on	WO 2002067978

PRIORITY APPLN. INFO: US 2001-333975P 20011129; US 2001-271186P 20010223; US 2002-78808 20020219

L2 ANSWER 49 OF 57 HCAPLUS COPYRIGHT 2004 ACS on STN

TI **Articular cartilage repair** by gene therapy using growth factor-producing mesenchymal cells

AB Objective. To investigate the repair of partial-thickness lesions in rat articular cartilage by combining cell transplantation with transfer of growth factor cDNA. Methods. Mesenchymal cells isolated from rib perichondrium were infected ex vivo with adenoviral vectors carrying bone morphogenetic protein 2 (**BMP**-2) or insulin-like growth factor 1 (IGF-1) cDNA. The cells were suspended in fibrin glue and applied to mech. induced partial-thickness cartilage lesions in the patellar groove of the rat femur. The filling of the defects was quantified and the quality and integration of the newly formed tissue were assessed by histochem. and immunohistochem. methods. Uninfected cells or cells infected with a LacZ reporter gene vector served as controls. Results. Transplanted cells were able to attach to the wounded articular cartilage and were not displaced from the lesions by joint movement. Cells infected with both adenoviral vectors AdBMP-2 and AdIGF-1 produced repair cartilage of hyaline morphol. containing a type II collagen-pos. but type I collagen-neg. proteoglycan-rich matrix that restored the articular surface

in most lesions. Uninfected cells either failed to fill up the defects or formed fibrous tissue mainly composed of type I collagen. Excessive cells were partially dislocated to the joint margins, leading to osteophyte formation there if AdBMP-2-infected cells were used. These adverse effects, however, were not seen with AdIGF-1-infected cells. Conclusion. Stimulation of perichondrium-derived mesenchymal cells by transfer of growth factor cDNA in a partial-thickness defect, model allows for satisfactory cartilage restoration by a repair tissue comparable with hyaline articular cartilage.

ACCESSION NUMBER: 2003:176756 HCAPLUS
DOCUMENT NUMBER: 139:1398
TITLE: **Articular cartilage repair** by gene therapy using growth factor-producing mesenchymal cells
AUTHOR(S): Gelse, Kolja; von der Mark, Klaus; Aigner, Thomas; Park, Jung; Schneider, Holm
CORPORATE SOURCE: University of Erlangen-Nuernberg, Erlangen, Germany
SOURCE: Arthritis & Rheumatism (2003), 48(2), 430-441
CODEN: ARHEAW; ISSN: 0004-3591
PUBLISHER: John Wiley & Sons, Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English
REFERENCE COUNT: 43 THERE ARE 43 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 50 OF 57 HCAPLUS COPYRIGHT 2004 ACS on STN
TI **Articular cartilage repair** and growth factors
AB A review with 20 refs., on articular cartilage damages and growth factors (**BMP**, TNF, FGF, IGF) in bone cartilage formation and repair.

ACCESSION NUMBER: 1999:54793 HCAPLUS
DOCUMENT NUMBER: 130:232574
TITLE: **Articular cartilage repair** and growth factors
AUTHOR(S): Anon.
CORPORATE SOURCE: Japan
SOURCE: Kitasato Igaku (1998), 28(5), 411-414
CODEN: KIIGDP; ISSN: 0385-5449
PUBLISHER: Kitasato Igakkai
DOCUMENT TYPE: Journal; General Review
LANGUAGE: Japanese

L2 ANSWER 51 OF 57 HCAPLUS COPYRIGHT 2004 ACS on STN
TI Cartilage-derived morphogenetic proteins and cartilage morphogenesis
AB A review with 73 refs. Cartilage morphogenesis is a prerequisite for skeletal development and maintenance. The morphogenesis of cartilage dets. the shape of bones, and joints including articular cartilage, ligaments, and tendon. This article reviews the recent advances in cartilage-derived morphogenetic proteins (CDMPs) and related bone morphogenetic proteins (BMPs). Cartilage-derived morphogenetic proteins (CDMPs) are related to BMPs and are critical for cartilage and joint morphogenesis. Cartilage morphogenesis is a multistep cascade that includes factors for initiation, promotion, and maintenance of cartilage phenotype. The extracellular matrix of cartilage consists of a constellation of macromols. such as collagens, proteoglycans, and glycoproteins. Morphogens bind to extracellular matrix components and assemble a morphogenetic scaffold. Recent advances in CDMPs may aid in **articular cartilage repair** and regeneration.

ACCESSION NUMBER: 1998:736817 HCAPLUS
DOCUMENT NUMBER: 130:122545
TITLE: Cartilage-derived morphogenetic proteins and cartilage morphogenesis
AUTHOR(S): Reddi, A. H.
CORPORATE SOURCE: Centre for Tissue Regeneration and Repair, Department

of Orthopaedic Surgery, School of Medicine, University of California Davis, Sacramento, CA, 95817, USA

SOURCE: Microscopy Research and Technique (1998), 43(2), 131-136
CODEN: MRTEEO; ISSN: 1059-910X

PUBLISHER: Wiley-Liss, Inc.
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
REFERENCE COUNT: 73 THERE ARE 73 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 52 OF 57 HCAPLUS COPYRIGHT 2004 ACS on STN
TI Repair of articular cartilage defect by cultured chondrocyte transplantation, periosteal graft, or cytokines
AB A review with 22 refs. on the biol. repair methods of articular cartilage defect. Cultured chondrocyte transplantation, periosteal graft, and administration of cytokines are the 3 major methods so far tried for this purpose. It was found that the allogenic transplantation of cultured chondrocytes was highly useful when the cell were cultured in collagen gel, since the chondrocytes maintained their phenotype in the gel and also the gel-chondrocytes complex became rigid structure, which was feasible for settling in the acceptor site. On the other hand, the chondrocytes cultured in monolayer may easily de-differentiate into fibroblasts, though some of them may maintain their original chondrocyte phenotype. It was recently shown that cambium layer of periosteum has ability to produce cartilage. Thus, auto-transplantation of periosteum is also useful for cartilage reconstruction. Furthermore, it was found that the culture of the cells isolated from periosteum produce cartilage followed by bone. This cell culture has a potential for future application. As regard to the clin. application of cytokines such as bone morphogenetic proteins (**BMP**), transforming growth factor-β (TGF-β), basic fibroblast growth factor (bFGF) and hepatic growth factor (HGF), optimal concns. of cytokines, carrier system to be used and synergistic effects are still remained to be clarified.
ACCESSION NUMBER: 1997:640882 HCAPLUS
DOCUMENT NUMBER: 127:302844
TITLE: Repair of articular cartilage defect by cultured chondrocyte transplantation, periosteal graft, or cytokines
AUTHOR(S): Wakitani, Shigeyuki; Kimura, Tomoatsu; Ochi, Takahiro
CORPORATE SOURCE: Seikei Geka, Kokuritsu Osaka Minami Byoin, Kawachinagano, 586, Japan
SOURCE: Bone (Osaka) (1997), 11(3), 133-140
CODEN: BONEFN; ISSN: 0914-7047
PUBLISHER: Medikaru Rebyusha
DOCUMENT TYPE: Journal; General Review
LANGUAGE: Japanese

L2 ANSWER 53 OF 57 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
TI Enhanced **articular cartilage repair** in the horse using chondrocytes transduced with an adenovirus BMP7 transgene.
ACCESSION NUMBER: 2000:497256 BIOSIS
DOCUMENT NUMBER: PREV200000497377
TITLE: Enhanced **articular cartilage repair** in the horse using chondrocytes transduced with an adenovirus BMP7 transgene.
AUTHOR(S): Goodrich, L. R.; Nixon, A. J.; Hidaka, C.; Quitoriano, M.; Brower-Toland, B. T.; Bent, S. J.; Warren, R. F.; Crystal, R. G.
SOURCE: Veterinary Surgery, (September-October, 2000) Vol. 29, No. 5, pp. 463. print.
Meeting Info.: Tenth Annual American College of Veterinary Surgeons Symposium. Arlington, VA, USA. September 21-24,

2000.
ISSN: 0161-3499.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 15 Nov 2000
Last Updated on STN: 10 Jan 2002

L2 ANSWER 54 OF 57 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
TI N,N-dicarboxymethyl chitosan as delivery agent for bone morphogenetic protein in the repair of articular cartilage.
AB Bone morphogenetic protein (**BMP**), associated with N,N-dicarboxymethyl chitosan, is used to induce or facilitate the repair of articular cartilage lesions. This association is intended for the synergistic potentiation of the respective biological effects. Data show that **BMP**-7 enhances the in vivo proliferation of cells with chondrocytes phenotype in the articular environment, leading to partial healing of the articular surface of the lesions. N,N-dicarboxymethyl chitosan is found to be useful as a molecular carrier or drug delivery agent.
ACCESSION NUMBER: 1999:180534 BIOSIS
DOCUMENT NUMBER: PREV199900180534
TITLE: N,N-dicarboxymethyl chitosan as delivery agent for bone morphogenetic protein in the repair of articular cartilage.
AUTHOR(S): Mattioli-Belmonte, M. [Reprint author]; Gigante, A.; Muzzarelli, R. A. A.; Politano, R.; De Benedittis, A.; Specchia, N.; Buffa, A.; Biagini, G.; Greco, F.
CORPORATE SOURCE: Inst. Normal Human Morphology, Fac. Med., Univ. Ancona, Via Tronto 10/A, 60020 Ancona, Italy
SOURCE: Medical and Biological Engineering and Computing, (Jan., 1999) Vol. 37, No. 1, pp. 130-134. print.
CODEN: MBECDY. ISSN: 0140-0118.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 5 May 1999
Last Updated on STN: 16 Jun 1999

L2 ANSWER 55 OF 57 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
TI Stimulation of **articular cartilage repair** in established arthritis by local administration of transforming growth factorbeta into murine knee joints.
AB A severe consequence of rheumatoid arthritis is depletion of proteoglycans (PGs) from articular cartilage leading to functional impairment of this tissue. We investigated whether local administration of anabolic factors (transforming growth factors-beta1) and -beta2 (TGF-beta1 and -beta2, respectively) and bone morphogenetic protein-2 (**BMP**-2) into joints could stimulate cartilage repair during arthritis. A unilateral arthritis was induced in mice by intra-articular injection of zymosan. Starting on Day 4 after the induction of arthritis, three injections of TGF-beta1 (200 ng) were given (Days 4, 6, and 8). On Day 11, articular cartilage PG synthesis was measured by 35S-sulfate incorporation, and histologic knee joint sections were prepared, which were used to analyze cartilage PG content by quantification of safranin O staining. Additionally, histologic sections were used to analyze inflammation and chondrophyte-formation. Local administration of TGF-beta1 did not modify inflammation but clearly stimulated PG synthesis and restored PG content of depleted cartilage. TGF-beta2 appeared to be as potent as TGF-beta1 in the stimulation of cartilage repair, and both TGF-beta isoforms also stimulated the formation of chondrophytes in this rodent model. In contrast to TGF-beta, three intra-articular injections with 200 ng **BMP**-2 did not stimulate the repair process. In summary, this study demonstrates for the first time that local administration of

TGF-beta into arthritic joints stimulates the replenishment of PGs in depleted cartilage.

ACCESSION NUMBER: 1998:161572 BIOSIS
DOCUMENT NUMBER: PREV199800161572
TITLE: Stimulation of **articular cartilage repair** in established arthritis by local administration of transforming growth factorbeta into murine knee joints.
AUTHOR(S): Glansbeek, Harrie L. [Reprint author]; Van Beuningen, Henk M.; Vitters, Elly L.; Van Der Kraan, Peter M.; Van Den Berg, Wim B.
CORPORATE SOURCE: Dep. Rheumatol., Univ. Hosp. Nijmegen Geert Grooteplein zuid 8, 6525 GA Nijmegen, Netherlands
SOURCE: Laboratory Investigation, (Feb., 1998) Vol. 78, No. 2, pp. 133-142. print.
CODEN: LAINAW. ISSN: 0023-6837.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 6 Apr 1998
Last Updated on STN: 6 Apr 1998

L2 ANSWER 56 OF 57 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
TI MESENCHYMAL CELL DIFFERENTIATION INTO CHONDROCYTE IN MONOLAYER BONE MORPHOGENETIC PROTEIN **BMP** COATED CULTURE AS A MODEL OF **ARTICULAR CARTILAGE REPAIR** PROCESS.
ACCESSION NUMBER: 1989:466769 BIOSIS
DOCUMENT NUMBER: PREV198937099413; BR37:99413
TITLE: MESENCHYMAL CELL DIFFERENTIATION INTO CHONDROCYTE IN MONOLAYER BONE MORPHOGENETIC PROTEIN **BMP** COATED CULTURE AS A MODEL OF **ARTICULAR CARTILAGE REPAIR** PROCESS.
AUTHOR(S): IWATA H [Reprint author]
CORPORATE SOURCE: DEP ORTHOPEDICS, NAGOYA UNIV, SCH MED
SOURCE: Zeitschrift fuer Rheumatologie, (1988) Vol. 47, No. 4, pp. 316.
Meeting Info.: 23RD CONGRESS OF THE DEUTSCHEN GESELLSCHAFT FUER RHEUMATOLOGIE (WEST GERMAN SOCIETY FOR RHEUMATOLOGY), AACHEN, WEST GERMANY, SEPTEMBER 13-17, 1988. Z RHEUMATOL.
CODEN: ZRHMBQ. ISSN: 0340-1855.
DOCUMENT TYPE: Conference; (Meeting)
FILE SEGMENT: BR
LANGUAGE: GERMAN
ENTRY DATE: Entered STN: 12 Oct 1989
Last Updated on STN: 12 Oct 1989

L2 ANSWER 57 OF 57 BIOTECHDS COPYRIGHT 2004 THE THOMSON CORP. on STN
TI **Articular cartilage repair** by gene therapy using growth factor-producing mesenchymal cells; adeno virus-mediated bone morphogenetic protein-2 or somatomedin-C gene transfer in animal model useful for gene therapy
AN 2003-14098 BIOTECHDS
AB AUTHOR ABSTRACT - Objective. To investigate the repair of partial-thickness lesions in rat articular cartilage by combining cell transplantation with transfer of growth factor complementary DNA (cDNA).Methods. Mesenchymal cells isolated from rib perichondrium were infected ex vivo with adenoviral vectors carrying bone morphogenetic protein 2 (**BMP**-2) or insulin-like growth factor 1 (IGF-1) cDNA. The cells were suspended in fibrin glue and applied to mechanically induced partial-thickness cartilage lesions in the patellar groove of the rat femur. The filling of the defects was quantified and the quality and integration of the newly formed tissue. were assessed by histochemical and immunohistochemical methods. Uninfected cells or cells infected with a LacZ reporter gene vector served as controls.Results. Transplanted

cells were able to attach to the wounded articular cartilage and were not displaced from the lesions by joint movement. Cells infected with both adenoviral vectors AdBMP-2 and AdIGF-1 produced repair cartilage of hyaline morphology containing a type II collagen-positive but type I collagen-negative proteoglycan-rich matrix that restored the articular surface in most lesions. Uninfected cells either failed to fill up the defects or formed fibrous tissue mainly composed of type I collagen. Excessive cells were partially dislocated to the joint margins, leading to osteophyte formation there if AdBMP-2-infected cells were used. These adverse effects, however, were not seen with AdIGF-1-infected cells.Conclusion. Stimulation of perichondrium-derived mesenchymal cells by transfer of growth factor cDNA in a partial-thickness defect model allows for satisfactory cartilage restoration by a repair tissue comparable with hyaline articular cartilage. (12 pages)

ACCESSION NUMBER: 2003-14098 BIOTECHDS

TITLE: **Articular cartilage repair** by gene therapy using growth factor-producing mesenchymal cells; adeno virus-mediated bone morphogenetic protein-2 or somatomedin-C gene transfer in animal model useful for gene therapy

AUTHOR: GELSE K; VON DER MARK K; AIGNER T; PARK J; SCHNEIDER H
CORPORATE SOURCE: Univ Erlangen Nurnberg
LOCATION: Schneider H, Univ Erlangen Nurnberg, Dept Expt Med 1, Gluckstr 6, D-91054 Erlangen, Germany

SOURCE: ARTHRITIS AND RHEUMATISM; (2003) 48, 2, 430-441
ISSN: 0004-3591
DOCUMENT TYPE: Journal
LANGUAGE: English